

REMARKS

The Office Action dated September 16, 2008 has been received and carefully noted. The above amendments to the claims and the following remarks are submitted as a full and complete response thereto.

In accordance with the foregoing, claims 1 and 4 have been amended to more particularly point out and distinctly claim the subject matter of the invention. No new matter is being presented, and approval and entry are respectfully requested.

As a preliminary matter, Applicants respectfully note that the Office Action does not reject claim 4 in the first paragraph of page 3, but then discusses claim 4 in the ensuing analysis. Accordingly, Applicants respectfully note this error and request that claim 4 is presumably allowable because this claim was never formally rejected.

Furthermore, Applicants note that the drawings and the priority claim to PCT/JP05/01862 and Japanese Application No. 2004-027475 and 2004-032120 filed on September 11, 2006 have not been properly acknowledged. Therefore, Applicants respectfully request that the drawings and priority claim be properly considered and acknowledged.

Claims 1-9 are currently pending and under consideration.

REJECTION UNDER 35 U.S.C. § 102:

Claims 1-3 and 5-7 were rejected under 35 U.S.C. §102(b) as anticipated by Furuno (US 4,504,324) ("Furuno"). It is respectfully asserted that, for at least the

reasons provided below, Furuno fails to teach or suggest the elements of the pending claims. Reconsideration is requested.

Independent claim 1, upon which claims 2-9 are dependent, recites a surface treatment method for treating a surface of a metal material by heating the metal material. The surface treatment method includes removing a passive film. The removing includes heating together the metal material and an amino resin.

As will be discussed below, Furuno fails to disclose or suggest the elements of any of the presently pending claims.

Furuno generally relates to treatment of aluminum or aluminum alloy material in an ordered series of alkaline and acid baths. In particular, the Office Action specifically cites to Comparative Example 1 at col. 7, line 60 - col. 8, line 12. In this example, Furuno discloses dipping an aluminum plate in a series of various warmed solutions, including a bath of water soluble acryl melamine resin for electrodeposition that is followed by baking the treated metal. Assuming, *arguendo*, that one of ordinary skill in the art would conclude that the removal of the film by heating recited in claim 1 could be satisfied by placing the metal into a warm liquid bath, Applicants note that this alleged heating does not occur in the presence of the amino resin as recited in claim 1. Instead, Furuno discloses in example 1 a series of treatments in which the metal material undergoes a warmed basic bath to remove an oxide layer without the presence of the acryl melamine layer. The acryl melamine layer is later deposited on to the metal

material, well after the removal of the passive film of the oxide layer identified in the Office Action as the passive film.

In addition, in a heat treatment of Furuno, after removal of a passive film, an aluminum material is dipped in an acryl melamine solution in order to form an acryl melamine layer on a surface of the aluminum material. Then, solvent is volatilized from the solution to obtain a hardened layer. Thus, the heating of Furuno does not remove a passive film, where “the removing comprises heating together said metal material and a amino resin,” as recited in independent claim 1.

For at least these reasons, Applicants respectfully assert that claim 1 is allowable over Furuno. Claims 2-9 should be allowable as well, for at least the reason of depending from allowable claim 1.

Applicants further note that claims 2, 4, and 6-7 are also separately allowable over Furuno. For example, claim 2 recites applying the amino resin to the metal material prior to the heating of the metal for removal of the passive film. The Office Action alleged that this limitation is disclosed or suggested in Furuno through the electrodeposition of the acryl melamine layer to the metal and a subsequent baking of the metal. Applicants respectfully indicate that the Office Action is in error for at least the reason that the heating (*i.e.*, the baking) from Furuno is different from the heating recited in dependent claim 2. Specifically, Furuno does not teach or suggest, at least, “wherein said amino resin is applied to said surface of said metal material prior to heating said metal material,” as recited in dependent claim 2. Therefore the Office Action is logically inconsistent.

Applicants further note that the heating referenced by the Office Action in the analysis of this claim is not used for the removal of the passive film as recited in claims 1-2.

Regarding claim 4, the Office Action took the position that the limitation of heating the metal in an oven in which the amino resin is present is disclosed in Furuno through the disclosure that the acryl melamine is applied to the metal and the treated metal is then heated. Claim 4 has been amended to clarify that the amino resin is present in the oven but is not applied to the metal. Furthermore, as described above, the baking of Furuno cited in the Office Action is not used for the removal of the passive film, as recited in independent claim 1 and, therefore, included for dependent claim 4.

Continuing with claims 6-7, the Office Action alleged that these limitations are taught or suggested through the disclosure in Furuno of forming a treated metal product formed through the baking. In particular, the Office Action took the position that Furuno discloses coating the metal material and then heating the treated metal by baking to form the treated metal. However, this disclosure appears to be irrelevant to the features recited in claims 6 and 7 that the metal surface is modified during or after the heating for the removal of the passive film, as recited in claims 6 and 7.

Therefore, in view of the above, it is respectfully asserted that Furuno fails to teach or suggest all the features recited in independent claim 1 and related dependent claims. It is respectfully requested that independent claim 1 and related dependent claims be allowed.

REJECTION UNDER 35 U.S.C. § 103:

Claims 8 and 9 under 35 U.S.C. §103(a) as being unpatentable over Furuno as applied to claims 6 and 7, and further in view of an article by Gredelj entitled Characterization Of Aluminum Surfaces With And Without Plasma Nitriding By X-Ray Photoelectron Spectroscopy ("Gredelj"). The Office Action took the position that Furuno discloses all of the elements of the claims, with the exception of the performing nitriding or carburizing. The Office Action then relies upon Gredelj as allegedly curing this deficiency in Furuno. It is respectfully asserted that Furuno and Gredelj fail to teach or suggest the recitations of the pending claims. Reconsideration is requested.

In order for this rejection to be sustainable, Furuno and Gredelj, individually or combined, must teach or suggest all the recitations of independent claim 1. Accordingly, the arguments presented above supporting the patentability of independent claim 1 over Furuno are incorporated herein to support the patentability of dependent claims 8 and 9. Gredelj fails to cure the deficiencies of Furuno.

Gredelj generally relates to x-ray examination of aluminum surfaces with or without plasma nitriding using x-rays spectroscopy. However, Applicants respectfully indicate that claims 8-9 are allowable for at least the reason that Gredelj does not cure the above described deficiencies in Furuno, and therefore, these claims are allowable for at least the reasons of depending from allowable claim 1. The relevant disclosure in Gredelj at the second full paragraph of the article on page 240 merely discloses that it is known in

the field of metal processing to perform plasma nitriding. However, this and other sections of Gredelj do not teach or suggest, for example, removing a passive film by heating the metal in the presence of an amino resin as recited in claim 1. It would not be obvious to try to combine or modify Furuno with the description of Gredelj to have such a step.

Therefore, in view of the above, it is respectfully asserted that a combination of Furuno and Gredelj fail to teach or suggest all the features recited in independent claim 1 and related dependent claims 8 and 9. It is respectfully requested that dependent claims 8 and 9 be allowed.

CONCLUSION:

In view of the above, Applicants respectfully submit that the claimed invention recites subject matter which is neither disclosed nor suggested in the cited prior art. Applicants further submit that the subject matter is more than sufficient to render the claimed invention unobvious to a person of skill in the art. Applicants therefore respectfully request that each of claims 1-9 be found allowable and, along with allowed claims 20-36, 38, and 39, this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the Applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the Applicants respectfully petition for an appropriate extension of time.

Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Alicia Choi', is written over a horizontal line.

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